

**Work Order ID 69450**

Wednesday, May 11, 2011 10:33:05 AM



Page 1

Item ID: D206-642-541

Accept



Setup Start



Revision ID:

Stop



Item Name: Replacement Skidtube

Start Date: 5/11/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 6/6/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

*R*

Date: 11-05-11

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3274	D								
IIN-D206-642	Rev M								
100		0.00							
	DOCUMENT CONTROL								
DC		0.00							
Document Control	Memo Photocopy bluefile & type labels per PPP D206-642-541								

CHG003

*N/A* *[Signature]**71  
80  
42  
-18*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Work Order ID 69450

Wednesday, May 11, 2011 10:33:05 AM



Page 2

Item ID: D206-642-541

Accept



Setup Start



Revision ID:

Item Name: Replacement Skidtube

Stop



Start Date: 5/11/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 6/6/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop



Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

110



Skidtubes

Skidtubes

Skidtubes

0.00

0.00

Memo

\*\*\*VERIFY AND INSPECT THE MATERIAL PRIOR TO USE\*\*\*

1- Bend FWD end of tube using bend prog D3274 FWD and foil 10 as per dwg D3274, cut fwd end of tube with saw table setup D3274.

DP

11-5-26

2- remove fwd indexing ridge as per dwg D3274. Prepare for welding

DL 11/05/30

3- weld fwd cap as per dwg D3274 and OSI004.

AR Aluminum Rod Batch:

M112860/M 117456  
BG 11/06/03

BG 11/06/03

4- grind fwd cap weld on top surface only

5- Cut AFT end of tube at 170.9" as per dwg D3274 and deburr end.

6-Drill Aft cap pilot hole using DT8025

7 -Cleco DT8025 in position and install pilot hole drill Jig DT8742A,B,C,D. Drill 3/16" pilot holes as per Dwg D3274

8 -Remove inner indexing ridge on aft end of skidtube as per Dwg D3274 scribe batch #

9 -Open aft end cap holes to Ø0.208" as per Dwg D3274. Deburr aft end.

DP

11-6-6

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**Work Order ID 69450**

Wednesday, May 11, 2011 10:33:05 AM



Page 3

Item ID: D206-642-541

Accept



Setup Start



Revision ID:

Stop



Item Name: Replacement Skidtube

Start Date: 5/11/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 6/6/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
114  QC Quality Control	QC5- Inspect part completeness to step on W/O  Memo	0.00 0.00							
116  QC Quality Control	QC10- Inspect visual per QSI004- ground welds  Memo	0.00 0.00							
120  HandFinish Hand Finishing	Chemical Conversion Coat per QSI005 4.1  Memo	0.00 0.00							

2/  
11/06/07

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**Work Order ID 69450**

Wednesday, May 11, 2011 10:33:05 AM

Page 4

Item ID: D206-642-541

Accept

Setup Start

Revision ID:

Stop

Item Name: Replacement Skidtube

Start Date: 5/11/2011 Start Qty: 1.00

Required Date: 6/6/2011 Req'd Qty: 1.00

Cust Item ID:

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

130



QC

Quality Control

QC3- Inspect Part Finish

0.00

Memo

0.00

150



Skidtubes

Skidtubes

Skidtubes

Memo

0.00

1-Open Ø0.313" and 0.375" crossbolt spacer holes as per Dwg D3274

2-Deburr crossbolt spacer holes as per Dwg D3274 and blow out chips from inside the tube

3-Bond web in place as per Dwg D3274 &amp; QSI 015.

A/R ☐ Sikaflex-291 ☐ 11/6/08 ☐Sikaflex expire date: ☐ 12/2/12 ☐Start: ☐ 11/06/08 ☐ Time: ☐ 9:00 ☐Finish: ☐ 11/06/14 ☐ Time: ☐ 9:00 ☐

(Adhere for 12 hours)

BB 11/06/07

BB 11/06/08

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



**Work Order ID 69450**

Wednesday, May 11, 2011 10:33:05 AM

Page 5

Item ID: D206-642-541

Accept

Setup Start

Revision ID:

Stop

Item Name: Replacement Skidtube

Start Date: 5/11/2011 Start Qty: 1.00

Cust Item ID:

Required Date: 6/6/2011 Req'd Qty: 1.00

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start  
Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

160

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

1 0 BE 11/06/14

170

Skidtubes

0.00



Skidtubes

Memo

0.00

Skidtubes

1-Bend AFT end of tube using bend prog. D3274 AFT as per dwg D3274. Install drop pins in crossbolt spacer holes to maintain web position.

2- DRILL PILOT HOLES FOR WEARPLATES USING D3274-1T2  
OPEN HOLES TO .297" . Deburr3-DRILL TOE PIN HOLE .640" DIA AS PER DWG USING DT8935 FWD  
END OF TUBE  
DEBURR INSIDE OF HOLE AS NECESSARY (DO NOT ENLARGE HOLES)  
REMOVE ANY FOREIGN OBJECTS INSIDE OF TUBES

4- Countersink crossbolt spacer holes as per Dwg D3274

5- prepare for welding

BE 11/06/14

BE 11/06/17

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

18 | 21

# Work Order ID 69450

Wednesday, May 11, 2011 10:33:05 AM



Item ID: D206-642-541

Accept



Setup Start



Revision ID:

Stop



Item Name: Replacement Skidtube

Start Date: 5/11/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 6/6/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

180



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

11-2-92  
4.50  
11-6-14



11-6-27

190



Skid tubes

Skid tubes

Skid tubes

0.00

Memo

0.00

1-Insert D2649 & D3275-1 crossbolt spacers. Weld as per QSI 004 and Dwg D3274. Remember to back drill each hole before welding the other side. Use aluminum rod

A/R ☐ Aluminum Rod ☒ M112860

3-Grind cross bolt welds flush as per Dwg D3274.

4-Counterbore 5/16" x 0.750" deep as per Dwg D3274 and deburr.

BRG 11/06/28

11/07/04

11/07/04

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**Work Order ID 69450**

Wednesday, May 11, 2011 10:33:05 AM

Page 7

Item ID: D206-642-541

Accept

Setup Start

Revision ID:

Stop

Item Name: Replacement Skidtube

Start Date: 5/11/2011 Start Qty: 1.00

Cust Item ID:

Required Date: 6/6/2011 Req'd Qty: 1.00

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

200

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

8 May 11/11

Quality Control

Ad →

210

QC10- Inspect visual per QSI004- ground welds

0.00



QC

Memo

0.00

8 May 11/11

Quality Control

220

Pressure Wash per QSI005 4.3

0.00



HandFinish

Memo

0.00

Hand Finishing

Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch

1 1/2 16-78

# Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D206-642-541 PAR #: \_\_\_\_\_ Fault Category: Skid tubes NCR: Yes No DQA: ✓ Date: 11/07/15  
 Resolution: Lowest Disposition: Re-work QA: N/C Closed: ✓ Date: 11-07-15

NCR: 69450		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
11/7/6	#50	Found at inspection that the 18M + 21st holes from AFI do not align when installed test saddles. Both holes are	GP 11.07.06 DS1642	→ Drill out + remove both x-bolt spheres + Deburr hole.  + take in Re weld in Qty x 2	BE 11/07/06	S 11/07/07	GP 11.07.06 DS1642	8 11/07/06
		Slightly off. by at least 0.020"	GP 11.07.06 DS1642	D2649 B 71355 AR m112860 As per ASZ 004 Re counters Bore + Deburr As per Day.	BE 11/07/06  BE 11/07/06		GP 11.07.06 DS1642	8 11/07/06
		R.e. <del>not</del> Process: pulvers when welding						
13								

NOTE: Date & initial all entries

# Work Order ID 69450

Wednesday, May 11, 2011 10:33:05 AM



Page 8

Item ID: D206-642-541

Accept



Setup Start



Revision ID:

Stop



Item Name: Replacement Skidtube

Start Date: 5/11/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 6/6/2011 Req'd Qty: 1.00

Customer:

Reference:

Run Start



Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Stop



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

230

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00



Powdercoat

Powder Coating

Memo

START TIME: 9:30  
OVEN TEMPERATURE: 320  
FINISH TIME: 10:00

0.00

OF

IX Ø M. 11/07/11

240

QC3- Inspect Part Finish

0.00



QC

Quality Control

Memo

0.00

1 Ø M. 11/07/11

250

HandFinishing

0.00



HandFinish

Hand Finishing

Memo

1-Install Nut Plate as per Dwg D3274. Apply LPS-3 to Nut Plate and rivets.  
A/R ☐ N/A ☐ LPS-3 ☐ M109906

0.00

2-Install inserts as per Dwg D3274. Use a drop of Sikaflex inside insert holes a  
A/R ☐ ☐ Sikaflex-291 ☐ M117516  
Sikaflex expire date: ☐ 1516

1 Ø M. 11/07/11

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



**Work Order ID 69450**

Wednesday, May 11, 2011 10:33:05 AM



Item ID: D206-642-541

Accept



Setup Start



Revision ID:

Stop



Item Name: Replacement Skidtube

Start Date: 5/11/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 6/6/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_




Run Start



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
260  QC Quality Control	QC5- Inspect part completeness to step on W/O  <b>Memo</b> Inspect Nut Plate & Inserts	0.00  0.00							
270  HandFinish Hand Finishing	HAND FINISHING RESOURCE #1  <b>Memo</b> 1-Install wearpads & gaskets as per Dwg D3274. 2-Install ring as per Dwg D3274 A/R <input type="checkbox"/> Sikaflex-291 <input type="checkbox"/> M1175-6 Sikaflex expire date: <input type="checkbox"/> 15/01 3-Inspect for foreign objects as per QSI 024 4-Spray inside of tube on both sides of web with LPS-3 A/R LPS-3 Batch: <u>12/12</u> 5-Install Aft Cap and seal with Sikaflex. Clean excess adhesive. A/R <input type="checkbox"/> Sikaflex-291 <input type="checkbox"/> M1175-6 Sikaflex expire date: <input type="checkbox"/> 15/01	0.00  0.00				<u>1</u>	<u>0</u>	<u>12/12/01</u>	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**Work Order ID 69450**

Wednesday, May 11, 2011 10:33:05 AM

Page 10

Item ID: D206-642-541

Accept

Setup Start

Revision ID:

Stop

Item Name: Replacement Skidtube

Start Date: 5/11/2011 Start Qty: 1.00

Cust Item ID:

Required Date: 6/6/2011 Req'd Qty: 1.00

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

280

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

290

Identify as per dwg &amp; Stock Location: \_\_\_\_\_

0.00



Packaging

Memo

0.00

Packaging

300

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

69445 6/6/12

u/7/12

MF 11-07-12

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Wednesday, May 11, 2011 10:33:10 AM

Page 1

Work Order ID: 69450

Parent Item: D206-642-541

Parent Item Name: Replacement Skidtube



Start Date: 5/11/2011

Required Date: 6/6/2011

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:B 05.09.23 Revised per D206-642 Rev. J KJ/JLM  
 IPP Rev:C 07-02-23 Added SS Wearplates & Gaskets JLM  
 IPP Rev:D 07-12-06 replace NAS1515H3L to D3672-1 DD  
 IPP Rev:E 08-04-17 as per PAR 08-015 DD verified by:EC  
 IPP Rev:F 08-06-02 add comment DD verified by:EC  
 IPP Rev:G 08-10-09 revise details DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D2600-1-190

Manufactured

No

110

Each

34.4000

1

1



Extrusion Round 3" 206

Location

Loc Qty

Loc Code

HALL

34.4

59874

34.4

① DP 11-5-26

D3285-1

Manufactured

No

110

Each

110.0000

1

1



Cap

Location

Loc Qty

Loc Code

LG002

110

52511

63

52647

47

/

BB 11/06/03

D3282-041

Manufactured

No

150

Each

9.0000

1

1



Float Web (206L/407)

Location

Loc Qty

Loc Code

LG

9

65293

2

66363

7

1

BB 11/06/08

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Wednesday, May 11, 2011 10:33:10 AM

Page 2

Work Order ID: 69450

Parent Item: D206-642-541

Parent Item Name: Replacement Skidtube

Start Date: 5/11/2011

Required Date: 6/6/2011

Start Qty: 1.00

Required Qty: 1.00

D2649 Manufactured No 190 Each 199.0000 12 12



Cross Bolt Spacer



BE 11/06/28  
B 70394 12

Location	Loc Qty	Loc Code
LG	85	
68224	85	
LG001	114	
65317	1	
68507	113	

D3275-1 Manufactured No 190 Each 262.0000 12 12



Crossbolt Spacer



BE 11/06/28

Location	Loc Qty	Loc Code
LG	71	
67767	71	
LG002	191	
66109	11	
66930	108	
68946	72	

CR3212-4-03 Purchased No 250 Each 1,254.000 2 2



Cherry Rivet



M 11/07/11

Location	Loc Qty	Loc Code
FP-B	16	
110139	16	
ST311	1238	
114859	1238	

12

Wednesday, May 11, 2011 10:33:11 AM

Shop Packet Print

Page 2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



# Picklist Print

Wednesday, May 11, 2011 10:33:11 AM

Work Order ID: 69450

Parent Item: D206-642-541


Parent Item Name: Replacement Skidtube

Start Date: 5/11/2011

Required Date: 6/6/2011


Start Qty: 1.00

Required Qty: 1.00

D3415-041      Manufactured      No      250      Each      68.0000      1      1  
 *all 11/07/11*


Nut Plate

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST053	68	
33842	24	X1
67605	44	

CCR264SS3-3      Purchased      No      250      Each      139.0000      2      2  
 *all 11/07/11*


Cherry Rivet

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP-B	2	
113973	2	
ST311	137	
113973	2	
117086	135	X2

ALS4-1032-130      Purchased      No      250      Each      1,000.000      78      78  
 *all 11/07/11*

Insert

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST281	1000	
117331	1000	YA 117331

D3536-15      Manufactured      No      270      Each      25.0000      1      1  
 *all 11/07/11*

Gasket

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP011	25	
66559	25	X1

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Wednesday, May 11, 2011 10:33:11 AM

Work Order ID: 69450

Parent Item: D206-642-541



Parent Item Name: Replacement Skidtube

Start Date: 5/11/2011



Required Date: 6/6/2011

Start Qty: 1.00



Required Qty: 1.00

D3536-23	Manufactured	No	270	Each	23.0000	1	1
							<u>21</u> 11/07/11
Gasket							



<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP011	23	
43406	1	
53468	1	
<u>66560</u>	21	<u>XL</u>

D3536-35	Manufactured	No	270	Each	17.0000	1	1
							<u>21</u> 11/07/11
Gasket							

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP012	17	
66237	5	
67599	12	<u>1369755</u>

D3536-39	Manufactured	No	270	Each	17.0000	1	1
							<u>21</u> 11/07/11
Gasket							

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP015	17	
63578	5	
<u>66241</u>	12	<u>XL</u>

D3535-15	Manufactured	No	270	Each	19.0000	1	1
							<u>21</u> 11/07/11
Wearshoe							

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP018	19	
<u>66558</u>	12	<u>XL</u>
68358	7	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Page 5

Wednesday, May 11, 2011 10:33:11 AM

Work Order ID: 69450



Parent Item: D206-642-541



Parent Item Name: Replacement Skidtube

Start Date: 5/11/2011

Required Date: 6/6/2011

Start Qty: 1.00

Required Qty: 1.00

D3535-35  
  
 Manufactured No  
 Wearshoe

270 Each 21.0000 1 1



*Handwritten: 11/07/11*

Location

Loc Qty

Loc Code

FP018

21

B69756

*Handwritten: 21*

65926

3

67598

8

68348

10

D3535-39  
  
 Manufactured No  
 Wearshoe

270 Each 12.0000 1 1



*Handwritten: 11/07/11*

Location

Loc Qty

Loc Code

FP018

12

64076

12

*Handwritten: 21*

D3535-23  
  
 Manufactured No  
 Wearshoe

270 Each 31.0000 1 1



*Handwritten: 11/07/11*

Location

Loc Qty

Loc Code

FP021

31

66236

5

67594

13

68342

13

*Handwritten: 21*

D3537-3  
  
 Manufactured No  
 Wearpad

270 Each 13.0000 1 1



*Handwritten: 11/07/11*

Location

Loc Qty

Loc Code

FP017

13

35697

1

66230

12

B70817

*Handwritten: 21*

Wednesday, May 11, 2011 10:33:12 AM

Shop Packet Print

Page 5

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Wednesday, May 11, 2011 10:33:12 AM

Work Order ID: 69450

Parent Item: D206-642-541

Parent Item Name: Replacement Skidtube

Start Date: 5/11/2011

Required Date: 6/6/2011

Start Qty: 1.00

Required Qty: 1.00

D3537-1 Manufactured No

270 Each

56.0000 9 9



Wearpad



Handwritten: 11/07/11

Location

Loc Qty

Loc Code

FP017

56

370686

Handwritten: x9

63313

2

66135

2

66804

48

66935

4

AN960C10L Purchased No

NAS1149C0332  
R

270 Each

0.0000 80 80



washer

Handwritten: 11/18/11



Handwritten: (x80) 11/07/11

AN960C416 Purchased No

NAS1149C0463  
R

270 Each

0.0000 1 1



washer

Handwritten: 11/15/11



Handwritten: (x1) 11/07/11

D3672-1 Manufactured No

270 Each

1,371.000 2 2



Phenolic Washer



Handwritten: 11/07/11

Location

Loc Qty

Loc Code

FP-A

21

52505

21

ST074

1350

64177

850

66821

500

Handwritten: x2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



# Picklist Print

Wednesday, May 11, 2011 10:33:12 AM

Work Order ID: 69450



Parent Item: D206-642-541



Parent Item Name: Replacement Skidtube

Start Date: 5/11/2011

Required Date: 6/6/2011

Start Qty: 1.00

Required Qty: 1.00

AN3C4A	Purchased	No	270	Each	1,662.000	80	80
							(x80) JH 110711
BOLT							

Location

Loc Qty

Loc Code

ST350

1662

1118112

(x42)

117094

964

1117688

(x88)

117313

698

AN4C5A	Purchased	No	270	Each	532.0000	1	1
							JH 110711
BOLT							

Location

Loc Qty

Loc Code

FP-B

116

X1

112243

116

ST345

416

112243

416

D2646	Manufactured	No	270	Each	42.0000	1	1
							JH 110711
Aft Cap							

Location

Loc Qty

Loc Code

FP006

41

1368250

X1

62678

41

FP-4

1

69019

1

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Page 8

Wednesday, May 11, 2011 10:33:12 AM

Work Order ID: 69450



Parent Item: D206-642-541



Parent Item Name: Replacement Skidtube

Start Date: 5/11/2011

Required Date: 6/6/2011

Start Qty: 1.00

Required Qty: 1.00

D3413-1

Manufactured No

270

Each

36.0000

1

1



*Handwritten signature and date 5/10/11*

Ring

Location

Loc Qty

Loc Code

ST420

19

62961

8

66387

11

ST473

17

65294

3

66945

14

*Handwritten marks: X1 and lines*

Wednesday, May 11, 2011 10:33:12 AM

Shop Packet Print

Page 8

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**DART**

RELEASED

07.02.12

DEO ATTACHED

DESIGN <b>CP</b>	DRAWN BY <b>PH</b>	<b>DART AEROSPACE USA, INC.</b> PORT HADLOCK, WA	
CHECKED <b>[Signature]</b>	APPROVED <b>[Signature]</b>	DRAWING NO. <b>D3274</b>	REV. D SHEET 1 OF 4
DATE <b>06.12.19</b>		TITLE <b>SKIDTUBE ASSEMBLY</b>	SCALE NTS
<b>A</b>	<b>04.03.15</b>	<b>NEW ISSUE</b>	
<b>B</b>	<b>04.08.09</b>	<b>MOVE SADDLE HOLE: 42.14 WAS 42.76</b>	
<b>C</b>	<b>05.03.16</b>	<b>ADD -043; NEW INSERTS</b>	
<b>D</b>	<b>06.12.19</b>	<b>NEW INSERTS, SS WEARSHOE + GASKET</b>	

Qty -041	Qty -043	Part Number	Description
X		D3274-041	SKIDTUBE ASSEMBLY
	X	D3274-043	SKIDTUBE ASSEMBLY
1	1	D2600-1-240	EXTRUSION
1	1	D2646	AFT CAP
12	12	D2649	CROSS BOLT SPACER
12	37	D3275-1	CROSS BOLT SPACER
1	1	D3282-041	FLOAT WEB
1	1	D3285-1	CAP
1	1	D3413-1	RING
1	1	D3415-041	NUT PLATE
1	1	D3535-15	WEARSHOE
1	1	D3535-23	WEARSHOE
1	1	D3535-35	WEARSHOE
1	1	D3535-39	WEARSHOE
1	1	D3536-15	GASKET
1	1	D3536-23	GASKET
1	1	D3536-35	GASKET
1	1	D3536-39	GASKET
9	9	D3537-1	WEARPAD
1	1	D3537-3	WEARPAD
78	78	ALS7-1032-130	INSERT (or AKS4-1032-130, ALS4-1032-130, AELS-1032-130)
80	80	AN3C4A	BOLT
1	1	AN4C5A	BOLT
1	1	AN960C416	WASHER
80	80	AN960C10L	WASHER
2	2	CCR264SS3-3	RIVET
2	2	CR3212-4-03	RIVET
2	2	NAS1515H3L	WASHER

**GENERAL NOTES:**

1. TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
2. DAMAGE TOLERANCE ON FWD BEND:  
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 7 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020 DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
3. ALL HOLES DRILLED ON CENTERLINES.
4. BOND D3282-041 FLOAT WEB INTO D3274-1/-3 OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241/291 ADHESIVE PER DART QSI 015. ENSURE HOLES LINE-UP.
5. WELDING TO BE DONE PER DART QSI 004.
6. FINISH: - ACID ETCH, ALODINE ASSEMBLY PER DART QSI 005 4.1  
- POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
7. DRILL Ø0.297 HOLES FOR ALS7-1032-130 INSERTS USING DT3274-1T2 BEFORE FINISH. INSTALL ALS7-1032-130 INSERTS AFTER FINISH. SEAL WEARSHOE BOLTS WITH SIKAFLEX -241/-291.
8. SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.

Copyright © 2004 by DART AEROSPACE USA, INC.

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

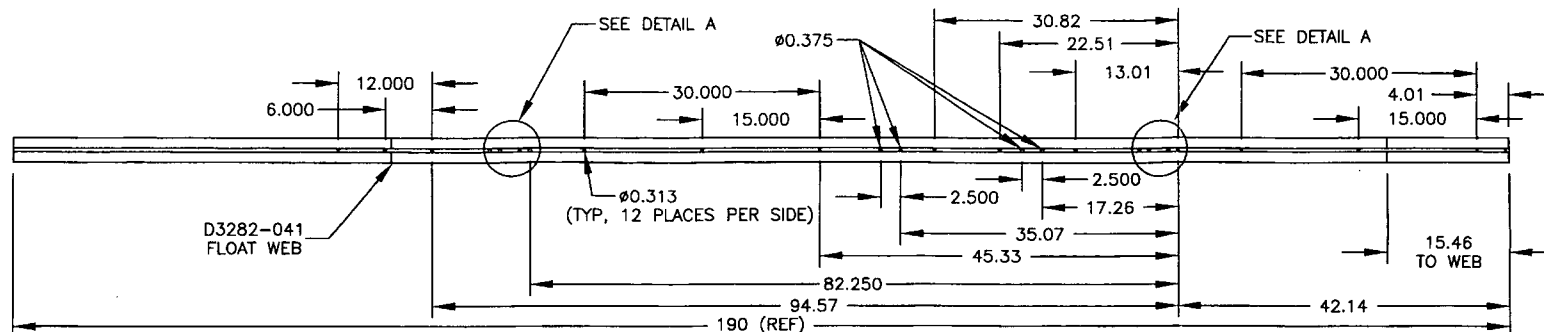
Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

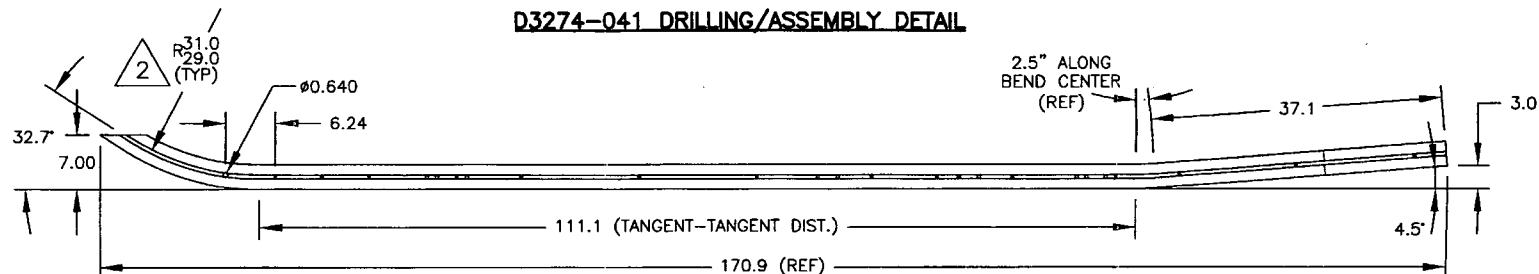
**NOTE:** Date & initial all entries

DEO ATTACHED

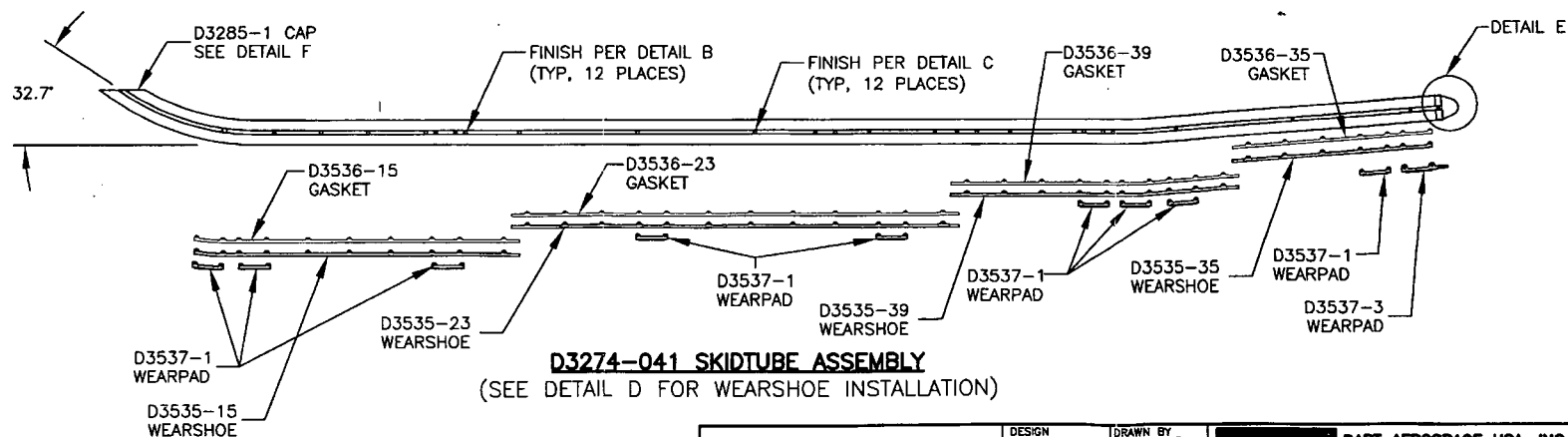
u/o 69450



**D3274-041 DRILLING/ASSEMBLY DETAIL**



**D3274-041 BEND/DRILLING DETAIL**



**D3274-041 SKIDTUBE ASSEMBLY**  
(SEE DETAIL D FOR WEARSHOE INSTALLATION)

RELEASED

07.02.12

COPYRIGHT © 2004 BY DART AEROSPACE USA, INC.		DESIGN CP	DRAWN BY PH	<b>DART</b> DART AEROSPACE USA, INC. PORT HADLOCK, MA
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.		CHECKED H	APPROVED H	
DATE 06.12.19		TITLE SKIDTUBE ASSEMBLY SCALE 1:15		

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

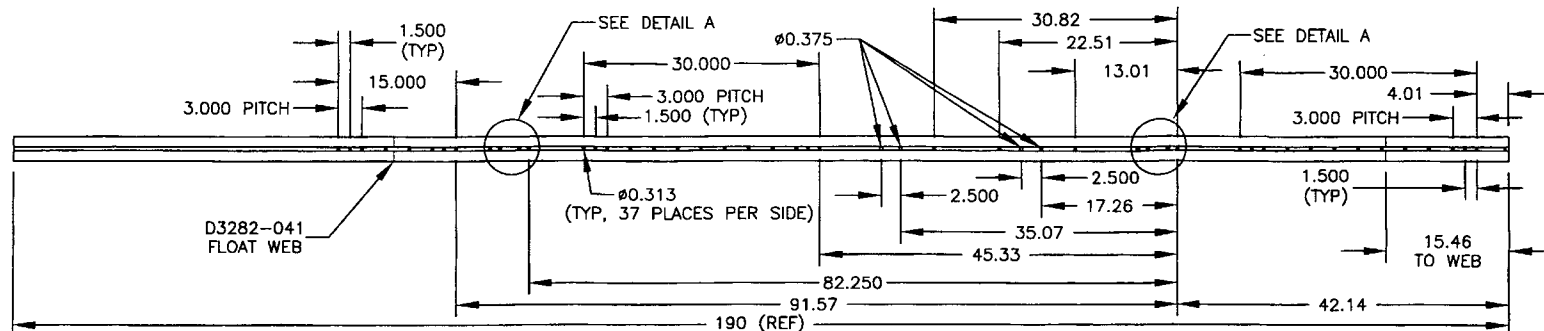
Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

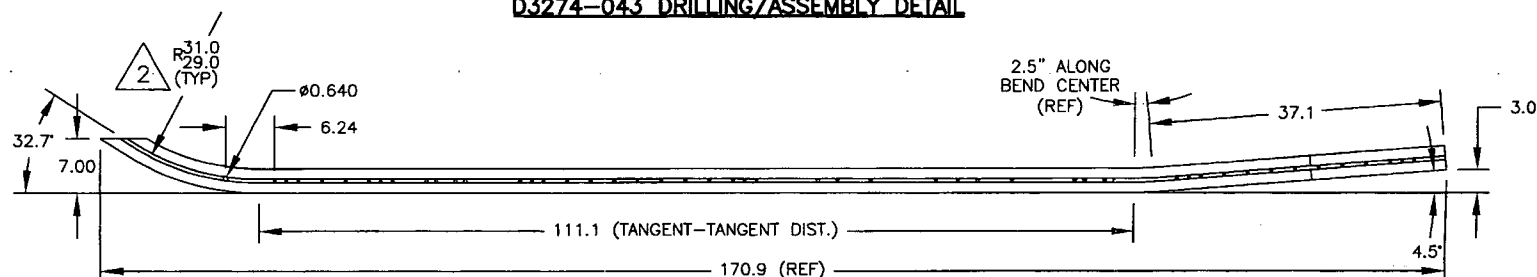
**NOTE:** Date & initial all entries



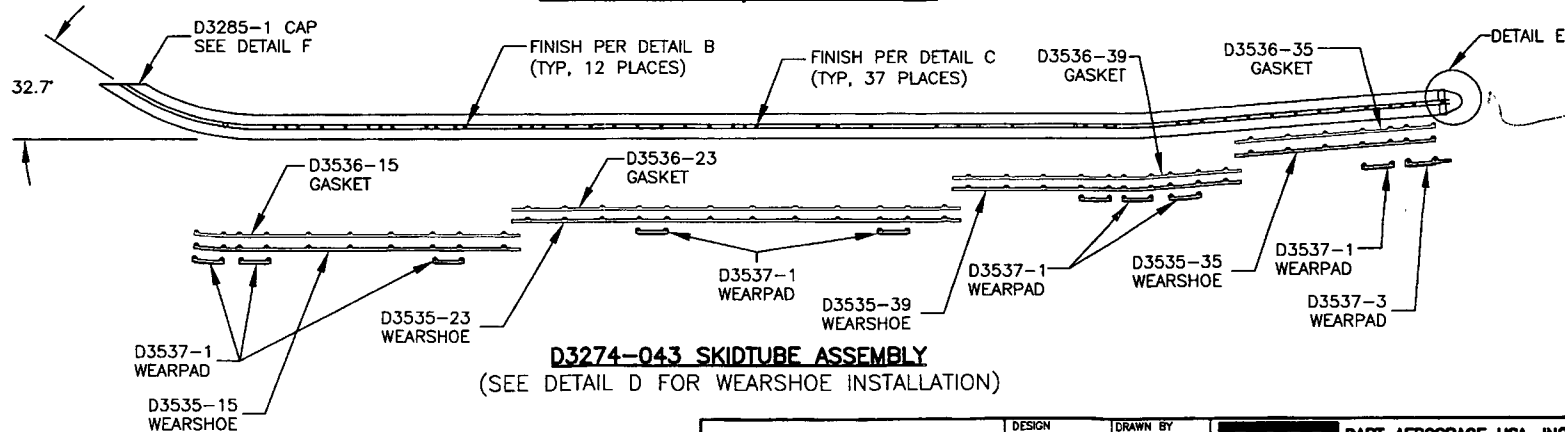
DEO ATTACHED



**D3274-043 DRILLING/ASSEMBLY DETAIL**



**D3274-043 BEND/DRILLING DETAIL**



**D3274-043 SKIDTUBE ASSEMBLY**  
(SEE DETAIL D FOR WEARSHOE INSTALLATION)

RELEASED

07.02.12

COPYRIGHT © 2004 BY DART AEROSPACE USA, INC.		DESIGN	DRAWN BY	<b>DART</b> DART AEROSPACE USA, INC. PORT HADLOCK, WA	
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.		CP	PH	DRAWING NO. D3274	REV. D SHEET 3 OF 4
		CHECKED	APPROVED	TITLE SKIDTUBE ASSEMBLY	SCALE 1:15
		DATE 06.12.19			

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

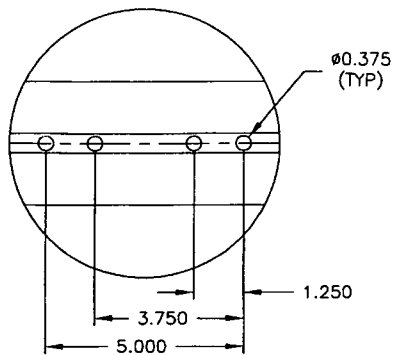
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

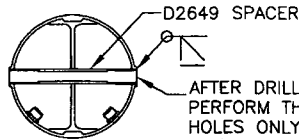
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# **DETAIL A: DRILL DETAIL**

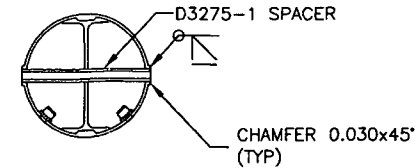


# **DETAIL B** FOR 0.375 HOLES ONLY

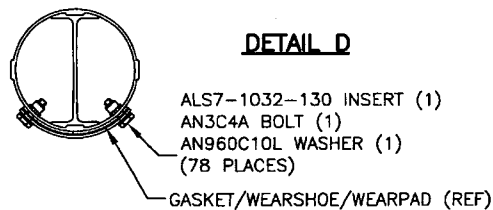


- AFTER DRILLING AND BENDING ASSEMBLY  
PERFORM THE FOLLOWING FOR 0.375  
HOLES ONLY:
1. CHAMFER HOLE 0.030x45°
  2. INSERT D2649 SPACER
  3. WELD INTO PLACE AND GRIND FLUSH
  4. C'BORE TO 0.313x0.75 DEEP

# **DETAIL C** FOR 0.313 HOLES ONLY



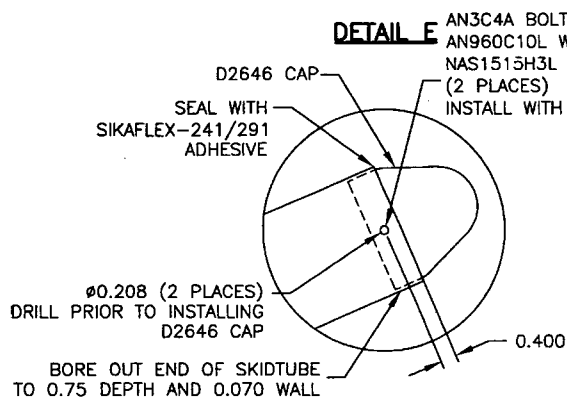
# **DETAIL D**



- ALS7-1032-130 INSERT (1)  
AN3C4A BOLT (1)  
AN960C10L WASHER (1)  
(78 PLACES)

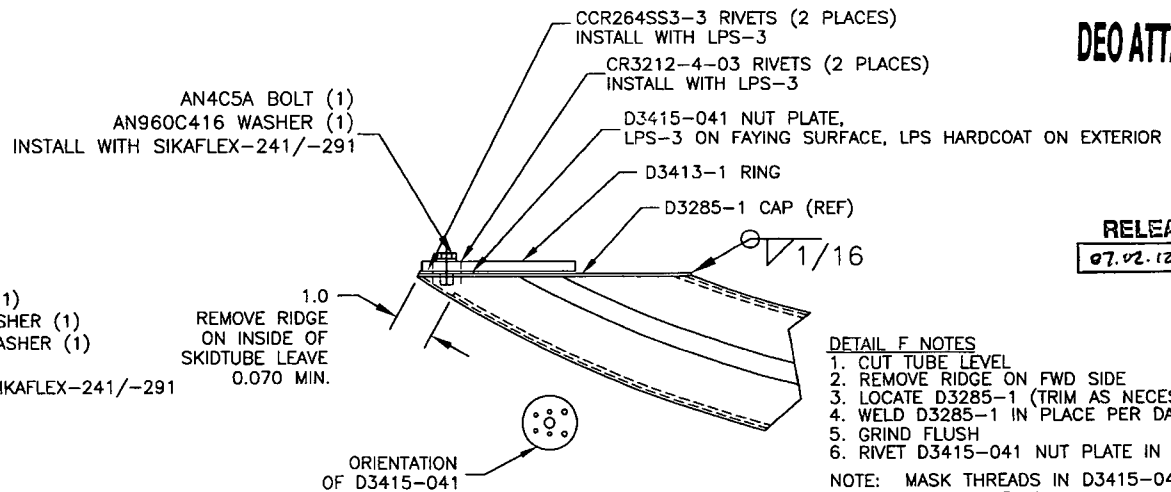
GASKET/WEARSHOE/WEARPAD (REF)

# **DETAIL E**



- AN3C4A BOLT (1)  
AN960C10L WASHER (1)  
NAS1515H3L WASHER (1)  
(2 PLACES)  
INSTALL WITH SIKAFLEX-241/-291

# **DETAIL F: END FINISHING DETAIL**



# **DETAIL F NOTES**

1. CUT TUBE LEVEL
2. REMOVE RIDGE ON FWD SIDE
3. LOCATE D3285-1 (TRIM AS NECESSARY)
4. WELD D3285-1 IN PLACE PER DART QSI 004
5. GRIND FLUSH
6. RIVET D3415-041 NUT PLATE IN PLACE

NOTE: MASK THREADS IN D3415-041  
PRIOR TO FINISH

**DEO ATTACHED**

**RELEASED**  
07.02.12

COPYRIGHT © 2004 BY DART AEROSPACE USA, INC.		DESIGN	DRAWN BY	<b>DART</b> DART AEROSPACE USA, INC. PORT HADLOCK, WA	
CHECKED	APPROVED	CP	PH	DRAWING NO.	REV. D
				D3274	SHEET 4 OF 4
DATE				TITLE	SCALE
06.12.19				SKIDTUBE ASSEMBLY	1:3

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL  
AND IS SUPPLIED ON THE EXPRESS CONDITION  
THAT IT IS NOT TO BE USED FOR ANY PURPOSE  
OR COPIED OR COMMUNICATED TO ANY OTHER  
PERSON WITHOUT WRITTEN PERMISSION FROM  
DART AEROSPACE USA, INC.

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

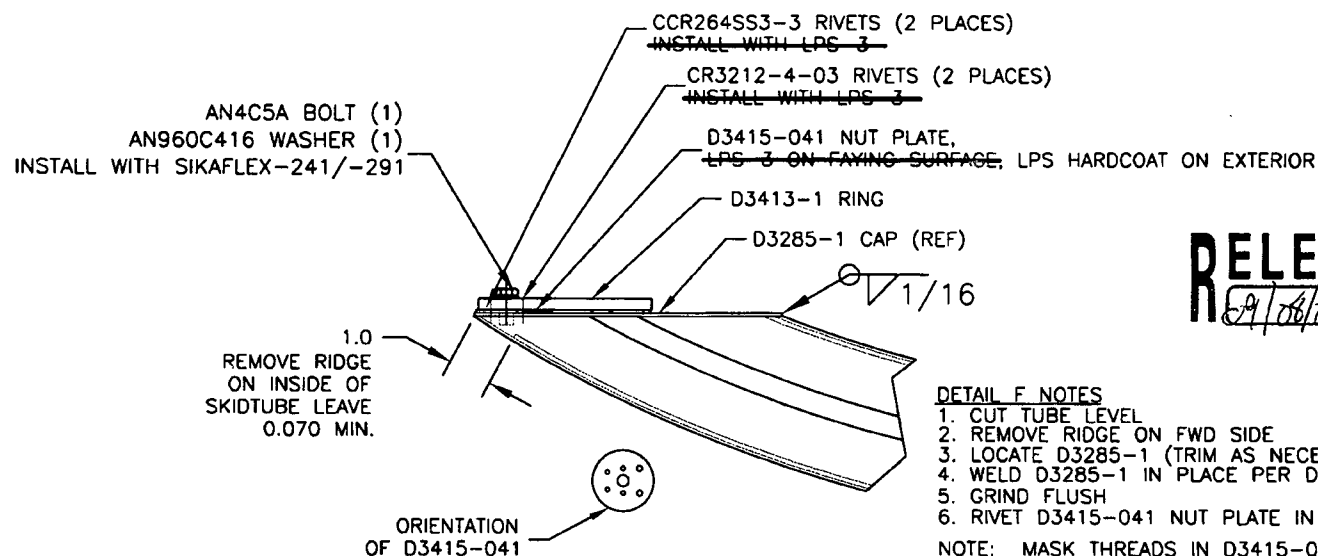
DRAWING NO. D3274	TITLE SKIDTUBE ASSEMBLY	REV. D	<b>DART AEROSPACE USA, INC</b> <b>ENGINEERING ORDER</b>	D.E.O. NO. D3274-D-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN <i>UP</i>	CHECKED <i>[Signature]</i>	MFG. APPR. <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DE APPR. <i>[Signature]</i>		
DATE 09.06.17	DATE 09.06.23	DATE 09/06/23	DATE 09/06/23	DATE 09.06.23		

LPS-3 IS NO LONGER USED DURING ASSEMBLY OF SKIDTUBE.

AMEND NOTE 8: "~~SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES 'LPS 3' AFTER FINISH AND INSTALLATION OF INSERTS.~~  
COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES 'LPS PROCYON' AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF  
POWDER COATING WITH MEK DEGREASER."

AMEND DETAIL F AS SHOWN:

**DETAIL F: END FINISHING DETAIL**



**RELEASED**  
09/06/23

**DETAIL F NOTES**

1. CUT TUBE LEVEL
2. REMOVE RIDGE ON FWD SIDE
3. LOCATE D3285-1 (TRIM AS NECESSARY)
4. WELD D3285-1 IN PLACE PER DART QSI 004
5. GRIND FLUSH
6. RIVET D3415-041 NUT PLATE IN PLACE

NOTE: MASK THREADS IN D3415-041  
PRIOR TO FINISH

**COPYRIGHT © 2009 BY DART AEROSPACE USA, INC**

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS  
NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT  
WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

NO. 255

AWS D17.1.2001  
QUALIFICATION TEST RECORD

Name: Barclay Elliot  
Job number: 69953  
Part number: 3206-642-341  
Description: 206  
Welding Process: Tig ☒ Mig ☐  
Base material: \_\_\_\_\_  
Current: AC ☒ DC ☐

TEST REQUIREMENTS AND RESULTS

Visual: pass ☒ fail ☐  
Penetration: pass ☒ fail ☐

UNACCEPTABLE

Cracks: pass ☒ fail ☐  
Undercut: pass ☒ fail ☐  
Pin holes: pass ☒ fail ☐  
Overlap (cold lap): pass ☒ fail ☐  
Porosity (surface): pass ☒ fail ☐  
Coloration: pass ☒ fail ☐

Qualifier Pat Cunn Date of Test Coupon 11.06.14  
Welder Barclay Elliot Date of Test Coupon 11/06/14

The above named individual is qualified in accordance with AWS D17.1.2001 to weld